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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/092,033	03/05/2002	Stephen F. Fulghum	301489.1003-113	7761

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EXAMINER

LEUBECKER, JOHN P

ART UNIT	PAPER NUMBER
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3739

11

DATE MAILED: 03/04/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/092,033

Applicant(s)

FULGHUM, STEPHEN F.

Examiner

John P. Leubecker

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 22 December 2003.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-35 is/are pending in the application.
- 4a) Of the above claim(s) 12-20 and 27-35 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-11 and 21-26 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 05 September 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

Election/Restrictions

1. Applicant's election without traverse of Group I in Paper No. 10 is acknowledged.
2. Claims 12-20 and 27-35 are withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to a nonelected invention there being no allowable generic or linking claim.

Drawings

3. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the diode laser light source must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

Claim Rejections - 35 USC § 112

4. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

5. Claims 1-11 and 21-26 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the

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relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. Claim 1 now recites a diode laser light source for producing excitation light. The invention, and thus the disclosure, is specifically directed to use of an arc lamp as the excitation light source. Note at least page 8, lines 23-24 and page 10, lines 16-18 which describe the invention as requiring an arc lamp. The only mention of a laser diode in the specification is on page 10, lines 13-16, wherein it is mention as one of two other light sources that have been used. Thus, the disclosure fails to provided adequate written description of how a laser diode is part of the disclosed invention or could be used in the disclosed invention.

6. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

7. Claim 6 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

As to claim 6, it appears that "a monochromatic image sensor" should be "said single image detector"; otherwise, this claim is referring to a second image sensor.

Claim Rejections - 35 USC § 102

8. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

9. Claims 1-6, 10, 11 and 21 are rejected under 35 U.S.C. 102(e) as being anticipated by Imaizumi et al. (U.S. Pat. 6,293,911).

Referring mainly to Figure 31, Imaizumi et al. disclose an embodiment including a diode laser light source and second light source (although shown in Figure 31 as a single light source, note col. 34, lines 55-61), a common optical path (108) with distal lens (118) which would require the optical combiner (64, Fig.21) when using the arrangement including the laser diode and second light source, a single CCD image detector (121), and a data processor (130). The images can be superimposed (note col. 22, lines 36-65).

Claim Rejections - 35 USC § 103

10. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

11. Claims 1-9, 11 and 21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Palcic et al. in view of Imaizumi et al.

Palcic et al. disclose the device as described in numbered paragraph 3 of the previous Office Action, paper number 5. Palcic et al. suggests that a laser can be used to provide the excitation light (col.4, lines 61-62) but does not provide the specifics of the light source (8), i.e., that it includes a diode laser and a second light source. Imaizumi et al. teaches that the use of two light sources, one being a diode laser, for a fluorescent endoscope system has been contemplated as one of numerous light source arrangements for providing both a reference light and an excitation light (note col.15, lines 8-13). The Examiner takes the position that since

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Palcic et al. does not provide specifics for the light source, it would be left up to the skilled artisan to use teachings in the prior art to fill in the gaps when reducing the Palcic et al. device to practice. Hence, it would have been obvious to one of ordinary skill in the art to have used a known prior art light source, the one described by Imaizumi et al. for example, functioning in a similar manner as Palcic et al. requires, to meet the objectives of the Palcic et al. device.

As to new claim 2, note col.10, lines 29-39. As to new claim 3 and 21, note col. 8, line 56. As to claim 4, note optical guide (10). Claims 5-9 and 11 were addressed in the previous Office Action.

12. Claims 10, 25 and 26 are rejected under 35 U.S.C. 103(a) as being unpatentable over Palcic et al. in view of Imaizumi et al. for the reasons set forth in numbered paragraph 5 of the previous Office Action.

Further as to claims 25 and 26, Imaizumi et al. only provides reference to a halogen light source *as an example*. The Examiner maintains the position that it would be obvious to use any suitable light source among all that are known in the art without involving inventive ingenuity, including arc lamps, a more particularly mercury arc lamps.

13. Claim 22 is rejected under 35 U.S.C. 103(a) as being unpatentable over Palcic et al. in view of Imaizumi et al. and further in view of Perelman et al. (U.S. Pat. 6,091,984).

Palcic et al. teach a device that uses, for example a CCD, for the image sensor but fails to disclose all other known image sensors that can alternatively used. Perelman et al. teaches what is known by all of those of ordinary skill—the alternative use of either a CCD or CMOS image

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sensor (note col. 4, lines 26-34). CMOS technology is not new and in certain arrangements has cost advantages and improved functionality over CCD technology. It would therefore have been obvious to one of ordinary skill in the art to have used a CMOS image sensor instead of a CCD image sensor for the reasons set forth above.

14. Claim 22 is rejected under 35 U.S.C. 103(a) as being unpatentable over Imaizumi et al. in view of Perelman et al. for the reasons set forth in the preceding paragraph.

15. Claims 23 and 24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Palcic et al. in view of Imaizumi et al. and further in view of Poindexter et al. (U.S. Pat. 5,979,423).

Palcic et al., as modified above, fails to disclose that the laser diode is of any particular type. Gallium nitride diode lasers with operate in the ultraviolet to blue wavelengths are well known and conventional in the art. Poindexter et al. is just one example of a teaching that a gallium nitride diode laser is a suitable source of excitation light (note col.2, lines 57-67). It would have been obvious to one of ordinary skill in the art to have used any known suitable diode laser light source as the diode laser light source taught by the Palcic et al./Imaizumi et al. device.

16. Claims 25 and 26 are rejected under 35 U.S.C. 103(a) as being unpatentable over Imaizumi et al. in view of Groner et al. (U.S. Pat. 6,104,939).

Imaizumi et al. provides reference to a halogen light source *as an example*. Groner et al. also teaches use of a halogen light source in addition to many alternatives including a mercury

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arc lamp and a laser diode (col. 24, line 55 to col.25, line 4). It would have been obvious to one of ordinary skill in the art as a matter of design choice to use any known alternative type of light source as taught by Groner et al.

Response to Arguments

17. Applicant's arguments filed December 22, 2003 have been fully considered but they are not persuasive.

With respect to the Palcic et al. reference, Applicant argues "Palcic et al. does not disclose use of a diode laser light source for excitation light, a second light source for reference light and a single image detector".

Palcic et al. does indeed disclose a single image detector (12) as pointed out in the previous Office Action. Palcic et al. also discloses a generic "light source" which provides excitation light and a reference light. Applicant is correct in that Palcic et al. fails to specify the number of sources (e.g., one or more) and the types of these sources (e.g., arc lamps, lasers, laser diodes). However, Applicant's claims are not claiming a number of sources or type of source that has not been contemplated in the art and is claiming, as the Examiner takes the position above, a combination of element that would be obvious to one of ordinary skill. Furthermore, Applicant did not set forth any explanation as to why the specificity of the number of light sources and the particular types was necessarily added to the claims nor why such conventional limitations should be considered patentable over the prior art.

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As to claims 2, 3 and 10 (which now is related to claims 25 and 26), Applicant did not rebut the position of obviousness set forth by the Examiner. No further discussion by the Examiner is necessary.

Conclusion

18. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Okazaki et al. (U.S. Pat. 5,247,533)—note teaching of a GaN diode laser.

19. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

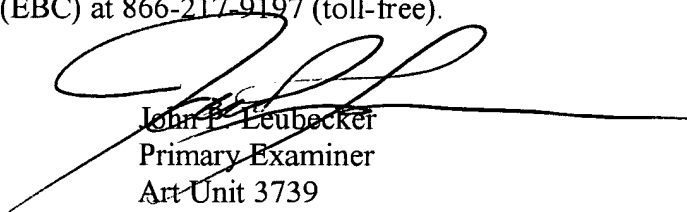
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Any inquiry concerning this communication or earlier communications from the examiner should be directed to John P. Leubecker whose telephone number is (703) 308-0951.

The examiner can normally be reached on Monday through Friday, 6:00 AM to 2:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Linda C.M. Dvorak can be reached on (703) 308-0994. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



John P. Leubecker
Primary Examiner
Art Unit 3739

jpl